

AMENDMENTS

In the Claims:

1. (Currently Amended) A process for producing antibodies that react specifically with a polypeptide, wherein:

- (a) DNA encoding the polypeptide is expressed transiently *in vitro* in a mammalian host cell using a vector that possesses at least one sequence encoding a detection signal tag linked to the sequence encoding the polypeptide that can be present transiently at the cell surface via ~~a GPI~~ an anchor,
- (b) independently of step (a), the DNA encoding the polypeptide is cloned into an expression vector and introduced directly into an animal, resulting in *in vivo* expression of a polypeptide in the animal, which expression causes the formation of antibodies against the polypeptide and wherein the expression vector employed for the genetic ~~in~~ step (e), is the same as that used *in vitro* for producing the target polypeptide in step (a), and
- (c) the antibodies that are formed in step (b) are removed from the animal in the form of serum, or following cell fusion, from hybridoma supernatants and then incubated with mammalian host cells from step (a) to obtain binding of the transiently expressed polypeptide on their surfaces ~~reacted with the polypeptide formed in step (a) and detected or enriched.~~

2. (Previously Amended) The process according to claim 1, wherein the vector used in step (a) possesses, at the N-terminus of the DNA encoded polypeptide, a sequence that encodes a secretion signal leader sequence, a detection signal and at the C-terminus a cleavable or partially cleavable cell membrane anchoring sequence.

3. (Previously Amended) The process according to claim 2, wherein the detection sequence is selected from the group consisting of His₆ tag sequence, the hemagglutinin sequence of an influenza virus and the myc tag sequence.

4. (Previously Amended) The process according to claim 1, wherein the vector encoding the polypeptide possesses a polyadenylation sequence at the C-terminal end of the detection sequence.

5. (Previously Amended) The process according to claim 1, wherein the vector encoding the polypeptide possesses a strong promoter at the 5' end of the DNA sequence encoding the polypeptide.

6. (Previously Amended) The process according to claim 5, wherein the strong promoter is selected from the group consisting of strong eucaryotic promoters, in particular the elongation factor 1 α promoter or the cytomegalovirus promoter.

7. (Previously Cancelled)

8. (Previously Amended) The process according to claim 1, wherein the DNA encoding the polypeptide is introduced into the animal in step (b) using a gene gun.

9. (Previously Amended) The process according to claim 1, wherein the animal employed in step (b) is a mouse, a rat or a rabbit.

10. (Previously Amended) The process according to claim 1, wherein in step (b), a genetic adjuvant is administered in addition to the DNA encoding the polypeptide-encoding DNA.

11. (Previously Amended) The process according to claim 10, wherein the genetic adjuvant is a cytokine expression vector which increases antibody production.

12. (Previously Amended) The process according to claim 1, wherein suitable cells from an animal which has been immunized in accordance with step (b) are used for preparing hybridoma cells for forming monoclonal antibodies.

13. (Previously Cancelled)

14. (Previously Cancelled).

15. (Previously Amended) The process according to claim 1, wherein the antibody formed in step (b) is detected, after having been bound to the polypeptide formed in step (a), using an anti-antibody which is detected against the antibody.

16. (Previously Amended) The process according to claim 1, wherein the antibody which is reacted with the expressed polypeptide in step (c) is released by elution.

17. (Previously Amended) The process according to claim 1, wherein the detection signal is a sequence which is responsible for membrane anchoring using a GPI residue.

18. (Previously cancelled)

19. (New) The process according to claim 1, wherein the anchor is GPI.

20. (New) The process according to claim 1, further comprising an additional step of releasing bound antibody from the cell surfaces after step (c).

21. (New) The process according to claim 20, wherein the additional step comprises enzymatic cleavage of GPI from the cell surface.

22. (New) A process for producing antibodies that react specifically with a polypeptide, wherein:

- (a) DNA encoding the polypeptide is cloned into an expression vector and introduced directly into an animal, resulting in *in vivo* expression of a polypeptide in the animal, which expression causing the formation of antibodies against the polypeptide and wherein the expression vector employed for the genetic immunization possesses at least one sequence encoding a detection signal tag linked to the sequence encoding the polypeptide;
- (b) the antibodies that are formed in step (a) are removed from the animal in the form of serum, or following cell fusion, from hybridoma supernatants and then incubated with a solid phase matrix that can bind the formed antibodies;

- (c) DNA encoding the polypeptide is expressed transiently *in vitro* in a mammalian host cell using a vector that possesses at least one sequence encoding a detection signal tag linked to the sequence encoding the polypeptide that can be present transiently at the cell surface via an anchor, which vector is the same as that used *in vivo* in step (a), and wherein the host cell is incubated with the solid phase matrix of step (b).